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FARM CREDIT ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

MARKETING MUSHROOMS FROM THE  
KENNETT SQUARE AREA OF PENNSYLVANIA  
and  
Growers' and Buyers' Attitudes Concerning Proposed  
Marketing Plans for Mushrooms Produced in the Area

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A Report  
to a Committee of Growers and Others Considering the  
Organization of a Cooperative Marketing Association at  
Kennett Square, Pa.

EST 1941  
FARM CREDIT ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

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COOPERATIVE RESEARCH AND SERVICE DIVISION

Miscellaneous  
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## SUMMARY

This study is based on information and marketing data recorded on questionnaire forms during interviews with 53 mushroom growers in the Kennett Square area of Pennsylvania; on general marketing information received during interviews with 12 important wholesale receivers of Kennett Square mushrooms on the New York market, 4 such receivers in Newark, 6 in Philadelphia, 3 in Baltimore, and 3 in Washington, the produce-buying division of a leading chain-store organization in New York City, a cooperative brokerage organization in the same city, the head buyer of a large soup company in Camden, N. J., and from two leading local buyers in the Kennett Square area. In addition, marketing information on mushrooms was obtained from numerous publications and from other sources.

The weighted average seasonal wholesale price of mushrooms, based on top quotations for the second grade of whites on the New York market, has been 54 cents per 3-pound basket for each of the last two seasons as compared with 65 cents for the 1937-38 season, 75 cents for the 1936-37 season, and \$1.01 for the 1928-29 season.

Mushroom prices on the New York City market have declined at a much more rapid rate during the last 12 years than the slight increase in unloads there during this period seems to warrant. Competition from canned mushrooms and mushroom soup, which have decreased in price and increased considerably in quantity, may partly explain this decline.

During the last three seasons, there have been no peaks of high prices for mushrooms in the summertime on the New York market as in previous years. Monthly unloads of mushrooms at New York were about 10 carloads <sup>1</sup>/ a month for each of the 3 summer months back in 1928, 1929, and 1930. During the last 2 seasons unloads have been from 30 to 40 carloads a month for each of the 3 summer months, and each year the summer volume has increased noticeably.

Unloads of mushrooms at New York City from States other than Pennsylvania have increased tremendously during the last 3 seasons; from 65 carloads during the 1937-38 season to 261 carloads during the 1938-39 season and to 269 carloads in 1939-40. As a result, the proportion of all mushroom unloads at New York that came from Pennsylvania decreased from 95 percent in 1937-38 to only 79 percent in 1939-40.

Mushroom unloads at Philadelphia increased from 188 carloads in 1932 to 301 carloads in 1939. Back in the period from 1925 to 1933 Boston provided an outlet for an average of about 60 carloads a year of Pennsylvania mushrooms. In 1939, only 1 carload of Pennsylvania mushrooms was unloaded at Boston, while nearby trucked-in mushrooms amounted to the equivalent of 60 carloads.

The estimated total production of mushrooms in the United States increased from 10,000,000 pounds in 1922 to 17,500,000 pounds in 1929, and to approximately 29,500,000 pounds in 1934. If any such rate of increase in production has continued, a conservative estimate of the 1939 production would be about 40,000,000 pounds. It is estimated that about 21,000,000 pounds were produced in the Kennett Square area of Pennsylvania alone in 1939.

The estimated cash cost of producing mushrooms during the 1939-40 season in the Kennett Square area for growers who used mostly hired labor, kept their plants in repair, and had to pay interest on indebtedness for their plants, was between 15 and 16.5 cents per pound for yields between 1.6 and 1.8 pounds per square foot. This may be compared with an estimated cost of production of 26 cents per pound for 1-pound yields and 18.7 cents per pound for 1.5-pound yields in 1930. It would appear that about the only reduction in cost of producing mushrooms in the Kennett Square area during the last 10 years has come from a general increase in the average yield of the area.

<sup>1</sup>/ Although a very large proportion of the mushrooms received at New York City, Philadelphia, Boston and other city markets arrives by truck, these truck unloads are converted to carlot equivalents of 3,000 3-lb. baskets in the various Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture.



The 46 growers interviewed who supplied the marketing data presented in this report were 12 percent of the estimated 394 mushroom growers in the Kennett Square area. They operated 19 percent of the estimated number of houses and sold about 19 percent of the estimated production of mushrooms in the area. In other words, the sample was somewhat overweighted with growers whose operations were larger than the average. Between July 1, 1939, and July 1, 1940, these 46 growers planted on the average about 55,000 square feet per grower, and their sales for the season averaged about 30,000 three-pound baskets per grower.

In 1934, the average yield obtained by all Pennsylvania growers was estimated as approximately 1.33 pounds per square foot. The 46 growers interviewed had an average yield last season, 1939-40, of 1.61 pounds, with a range from 0.91 to 2.27 pounds per square foot. Eleven growers who planted less than 25,000 square feet to mushrooms averaged 1.85 pounds, 16 growers who planted between 25,000 and 50,000 square feet averaged 1.54 pounds, 12 growers who planted between 50,000 and 75,000 square feet averaged 1.49 pounds, and 7 growers who planted 75,000 square feet or more averaged 1.69 pounds per square foot.

Of all mushrooms sold by the 46 growers last season, 50 percent was reported to have been sold at the farm, slightly less than 50 percent shipped on consignment to commission merchants in various cities, and the small remaining part, only 0.3 of one percent, sold on a direct delivered sales basis. The 50 percent sold at the farm went to soup companies (16 percent of total sales), to canneries (19 percent of total sales), to chain-store buyers (10.6 percent of total sales), and to local buyers (4.5 percent of total sales). Of the 49.7 percent shipped on consignment, by far the largest part went to New York City. All 46 growers sold some mushrooms at the farm. Thirty-nine sold some to soup companies, 22 to canneries, 11 to chain-store buyers, and 10 to local buyers. All but one of the growers shipped some on consignment to city commission merchants in New York City, only 17 shipped on consignment to Philadelphia, and a few shipped to other cities.

The size of a grower's business appeared to influence his method of sale. Growers with less than 25,000 square feet sold only 16 percent of their mushrooms at the farm and shipped about 84 percent on consignment. Growers with more than 75,000 square feet sold 67 percent at the farm and shipped 33 percent on consignment.

The average net price received by the 46 growers for all mushrooms sold during the season was 37.1 cents per 3-pound basket. Net prices for mushrooms shipped to city markets on consignment averaged 34.9 cents per basket, while those sold at the farm averaged 39.3 cents.

Growers interviewed in the Oxford area averaged 39.2 cents as a seasonal net price for mushrooms shipped to New York City on consignment, while other growers averaged only 33.8 cents - more than 5 cents a basket less. Oxford growers put 20.5 percent of the mushrooms they shipped to New York City in the two lowest grades, compared with an average of 5.4 percent for other growers.

Problems in the marketing of mushrooms mentioned by the growers interviewed were "overproduction," "too much buying on the floor," and "buyers play growers off against one another." A few growers expressed the opinion that there was "crookedness in the market."

Special problems in the marketing of mushrooms arise from the extreme perishability of the product, the unfavorable reputation of Kennett Square mushrooms in the city markets, a type of container which does not stimulate retailer and consumer demand, and the need to educate the general public regarding methods of using mushrooms and their value as a food, especially for flavoring other dishes.

There were a number of opinions expressed with which a sizable majority of the growers interviewed were in agreement. The more important of these were the following:

Growers individually can do very little to improve present conditions in the industry.

Growers can do something through organization to improve conditions.

Some kind of an organization representative of all grower groups should be set up in the area to take charge of the marketing of fresh mushrooms.

Some of the details of proposed marketing plans on which a sizable majority of growers agree are:

1. Grading of mushrooms in the Kennett Square area would have to be improved before any marketing organization would be successful.

2. Frequent inspections at growers' packing houses of the pack and weight of mushrooms would be necessary.

3. The number of commission men in each city to whom Kennett Square mushrooms are shipped should be limited.

4. If possible, some steps should be taken to stabilize the wholesale market price.

5. If a marketing organization is set up in the area an enforceable marketing agreement with this organization should be signed by all growers.

6. Any organization set up in the area should attempt to encourage the formation of and cooperation with similar organizations in other areas.

7. A fixed amount per basket should be deducted to pay for inspection, advertising, administration, and other marketing expenses.

8. Any plan developed should not undertake to protect commission house solicitors from loss of income.

The operating program of the Mushroom Growers Association, Chicago, Ill., the possibilities of a country auction for mushrooms, and the application of a Federal marketing agreement to the sale of fresh mushrooms all represent possibilities which should be considered by those charged with the development of a program for the Kennett Square area.

## RECOMMENDATIONS

Information on which this report is based affords evidence that there is need for an effective and coordinated program for mar-

keting fresh mushrooms from the Kennett Square area of Pennsylvania. The responsibility for developing such a plan rests with the growers and particularly with the committee they have selected for that purpose.

If the growers decide to undertake the formation of a cooperative marketing association, they will desire to assure its success in every possible way. In so doing, they will wish to observe certain fundamental principles of cooperative organization and operation. Some of the more important of these essentials are:

1. A cooperative must be owned and controlled by growers and operated for their mutual benefit as producers. Benefit to mushroom growers must be the basis of any cooperative program, and any benefits that may accrue to affiliated interests should be incidental.

2. There must be some form of legal marketing agreement, between grower-members and the marketing agency, to give the cooperative assurance of a definite volume of mushrooms.

3. Growers must assume the responsibility of providing whatever initial capital may be required. Contributions to capital should be in proportion to the volume of business transacted by each member through his association, and the capital structure should be set up in such a way that ownership and control will be in the hands of active members.

4. Earnings or savings acquired by the cooperative may go to build up its capital, may be set aside as special reserves, or if not required for these purposes, all or a part may be refunded to members in proportion to their patronage.

5. The board of directors of any cooperative marketing agency must be elected by the grower-members. In this area it appears desirable that each grower should have only one vote regardless of the size of his business. It is essential that each district in the area should be represented on the board in proportion to the number of



grower-members in the district in relation to the whole area.

Definite and workable provisions should be made to improve the grading and pack of all mushrooms shipped for fresh consumption from the Kennett Square area by the proposed cooperative.

Whatever program is adopted, definite policies should be established for the marketing of fresh mushrooms. Marketing procedure may be flexible to meet conditions that may arise, but policies should be changed infrequently and only after experience has shown that increased benefits will result.

Any marketing program adopted should represent the best thought in the industry and should, in addition, take advantage of any useful suggestions or ideas available from other sources. As pointed out in this report, some of the following proposals may have possibilities:

- (a) An auction in the producing area for mushrooms.
- (b) Shipments to a limited number of commission houses.
- (c) Control of grading by inspection at growers' packing sheds.
- (d) More extensive use of consumer packages.
- (e) Obtaining a Federal marketing agreement for mushrooms in this area or in all principal producing areas supplying New York City and Philadelphia.

The need of a coordinated industry and marketing program is strongly indicated by the decreasing importance of the Kennett Square area in nearby markets and by the fact that growers in competitive areas are improving grading, control of marketing, and producing efficiency especially for summer production.

The indicated increase in the total production of mushrooms appears to foreshadow continued low prices unless steps are taken by growers in Kennett Square and other areas to improve their competitive position. The ele-

mentary steps that need to be taken to improve conditions from the marketing side are:

- (a) Improvements in grading.
- (b) A more attractive package (probably a consumer type of package).
- (c) An aggressive coordinated marketing program.
- (d) Work with consumers, retailers, and home economics specialists to make the public conscious of the value of mushrooms.

None of these things can be accomplished by the individual grower, but may be carried on effectively through cooperative action.

#### PURPOSE AND SCOPE OF SURVEY

At a meeting of representatives of the mushroom industry in the Kennett Square area, held in Wilmington, Del., April 30, 1940, ways and means of improving conditions in the mushroom industry were discussed. A 13-man executive committee was appointed and met on May 7 and again on May 17 at Kennett Square. At each meeting several members of the committee expressed the opinion that a survey should be made prior to consideration of any marketing program. As a result, the Cooperative Research and Service Division, Farm Credit Administration, was asked to conduct surveys of limited numbers of growers, commission men, and buyers representing chain stores, soup companies, and others. Field work in connection with this survey was carried on during June and July 1940. The purposes of the survey were:

1. To obtain and analyze data on marketing Kennett Square mushrooms in order to assist in formulating a growers' marketing program for the area.
2. To determine the degree of grower and buyer interest in such a program and their opinions regarding policies to be adopted and possible accomplishments.

#### GROWER SURVEY

Part of the information on which this report is based was obtained from a survey of 53 mushroom growers in the Kennett Square

producing area. Each grower was asked to furnish detailed and careful estimates concerning the quantity of mushrooms he had marketed during the past year, the outlets used in marketing, the number of square feet of bed space planted to mushrooms, and other important matters directly or indirectly related to his marketing of mushrooms. In addition, questions were asked to ascertain the attitudes of growers toward marketing plans proposed for the area.

All growers interviewed expressed opinions concerning the marketing plans proposed for the area, and 48 gave detailed information concerning their production, yields, costs, and methods of sale in 1939-40. Two of the 48 growers were very large operators and for that reason the data they furnished have not been included in many of the tables in this report. Their extremely large operations and the manner in which they marketed most of their mushrooms made it seem desirable to omit both so as to get a representative sample of the industry. As a result, most of the tables in this report include the data furnished by only 46 of the 53 growers interviewed.

#### CITY MARKET SURVEYS

The time available limited the data obtained in the city market survey. However, 12 wholesale receivers (commission merchants) of Kennett Square mushrooms were interviewed in New York City, 4 in Newark, 6 in Philadelphia, 3 in Baltimore, and 3 in Washington. Questions were asked to ascertain their practices

in receiving and disposing of Kennett Square mushrooms, the approximate volume of Kennett Square mushrooms they handled at different periods during the season, their experiences in handling these mushrooms, their attitudes regarding pack, grade, and quality, and opinions with respect to shortcomings of the present marketing system and possible remedies. Information was also obtained from the produce-buying division of a leading chain-store organization, from a cooperative brokerage organization, from the head buyer of a large soup company, and from two of the leading local buyers in the Kennett Square area.

#### PRICE AND SUPPLY OF FRESH MUSHROOMS

A large proportion of all mushrooms produced in the Kennett Square area of Pennsylvania is shipped to New York City, and this producing area is the most important source by far of fresh mushrooms sold on the New York City market. Daily mushroom prices on the New York City wholesale market have been quoted in the Producers' Price Current for many years and are the best available indication of price trends.

Prices quoted in the Producers' Price Current and unload reports of the United States Department of Agriculture have been used to arrive at a weighted average seasonal wholesale price per 3-pound basket on the New York City market for all seasons from 1928-29 up to and including 1939-40. July 1 of one year through June 30 of the following year constituted a season. These prices are shown in table 1 and figure 1, together with seasonal unload figures at New York City expressed as carloads of 3,000 3-pound baskets.

After a study of mushroom prices quoted in many daily issues of the Producers' Price Current, it was decided that the top quotation for the second grade of white mushrooms, usually called "Fancy" or "Medium," represented reasonably well the average wholesale price commission merchants received for all mushrooms sold. It was also found that the Wednesday quotation for this grade was closer to the average for an entire week than was the same quotation for any other day. Accordingly, prices for all Wednesdays in each month were averaged to obtain an average monthly price. These average monthly prices per

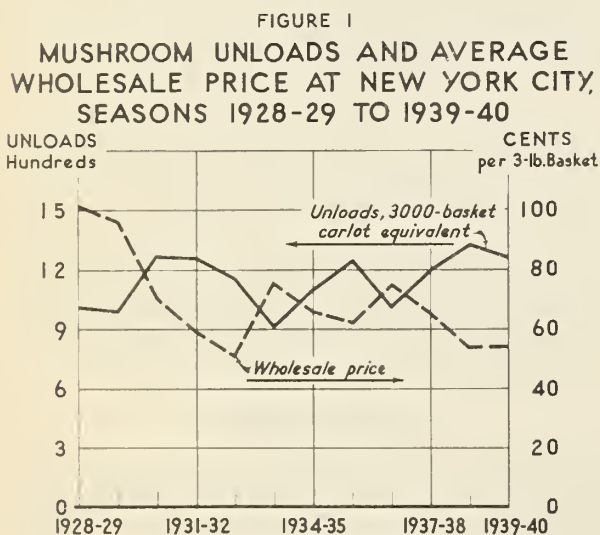




Table 1

YEARLY UNLOADS <sup>1/</sup> OF ALL MUSHROOMS, AND  
YEARLY WEIGHTED AVERAGE WHOLESALE  
PRICES <sup>2/</sup>, NEW YORK CITY,  
SEASONS 1928-29 to 1939-40

SEASON	UNLOADS	AVERAGE WHOLE- SALE PRICE PER 3-LB. BASKET	INDEX OF UNLOADS	INDEX OF PRICE
	<i>Carloads</i>	<i>Cents</i>	<i>1928-29 season = 100</i>	
1928-29	1,012	101	100	100
1929-30	998	96	99	95
1930-31	1,260	71	125	70
1931-32	1,251	59	124	58
1932-33	1,147	51	113	50
1933-34	904	76	89	75
1934-35	1,095	66	108	65
1935-36	1,243	62	123	61
1936-37	1,011	75	100	74
1937-38	1,198	65	118	64
1938-39	1,322	54	132	53
1939-40	1,258	54	124	53

SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U.S. Department of Agriculture for New York City from 1928 to 1939, and monthly reports, January to June 1940. Prices are top quotations on second grade of white mushrooms from the Producers' Price Current, 1928-40.

<sup>1/</sup> Both truck and express receipts are included, unload figures are in carlot equivalents of 3,000 3-lb baskets.

<sup>2/</sup> Top quotations on the second grade of white mushrooms quoted in producers' price current. This weighted average seasonal wholesale price was calculated in the following manner. An average monthly price was calculated by averaging the top quotation on the second grade of white mushrooms quoted in Producers' Price Current for all Wednesdays in the month. Each monthly price was then weighted by the unloads for that month to get a weighted average seasonal wholesale price.

3-pound basket for the last 12 seasons are shown in table 2 and figure 2, together with monthly unloads of mushrooms at New York City.

To obtain a weighted average seasonal wholesale price for New York City, the average monthly prices were weighted by monthly unloads. The importance of weighting average monthly prices by the unloads for each corresponding month is obvious.

This weighted average seasonal wholesale price could not be calculated for seasons prior to 1928-29 because 1928 was the first year that unloads by truck at New York City were reported. Therefore, this was the first year that reports of unloads of mushrooms from Pennsylvania were complete.

#### TRENDS IN MUSHROOM PRICES

As is shown in table 1 and figure 1, the weighted average seasonal wholesale price at New York City declined from \$1.01 per 3-pound basket in 1928-29 to 51 cents in 1932-33. It rose sharply the following season (1933-34) partly because an unusually small volume was shipped to New York City and partly because of some improvement in general economic conditions. It was fairly high in 1936-37 for the same reasons. For the last two seasons, however, this price has been only 54 cents, the lowest seasonal price on record, except for the 1931-32 and 1932-33 seasons.

It seems apparent that prices at New York City during the last 12 seasons have shown a decline which cannot be accounted for entirely by the relatively slight increase in unloads. For example, when unloads and prices for the 1928-29 season are each considered equivalent to 100, unloads equivalent to 100 in the 1936-37 season result in an average seasonal price equivalent to only 74. It is also noticeable that a decline of 8 percent in unloads at New York City in the 1939-40 season, as compared with the 1938-39 season, did not result in higher prices. If the present demand for fresh mushrooms is not increased, a substantial reduction in unloads appears necessary to increase prices at New York City noticeably.

Average monthly wholesale prices at New York City for the 12 seasons shown in table 2 and figure 2 present in some ways an even more striking picture of the situation. The trend of monthly prices shows that during the past two seasons there have been no peaks of high prices for mushrooms in the summer such as occurred in previous years. Changes in prices still occur from month to month, but they are less extensive than formerly and the general level of all monthly prices is much lower.

The trend in monthly unloads offers a partial explanation for these price trends.

Table 2

MONTHLY UNLOADS <sup>1/</sup> OF ALL MUSHROOMS, AND AVERAGE MONTHLY WHOLESALE PRICE <sup>2/</sup>  
NEW YORK CITY, SEASONS 1928-29 TO 1939-40

MONTH	1928-29		1929-30		1930-31		1931-32		1932-33		1933-34	
	UN-LOADS	AV. PRICE PER 3-LB. BASKET	UN-LOADS	AV. PRICE PER 3-LB. BASKET	UN-LOADS	AV. PRICE PER 3-LB. BASKET	UN-LOADS	AV. PRICE PER 3-LB. BASKET	UN-LOADS	AV. PRICE PER 3-LB. BASKET	UN-LOADS	AV. PRICE PER 3-LB. BASKET
	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>
July	15	201	17	152	9	148	16	83	14	66	16	99
August	18	166	10	175	9	121	17	71	15	86	11	138
September	21	180	39	120	28	146	33	73	37	92	52	89
October	77	122	102	98	131	83	175	49	136	39	116	64
November	141	106	149	86	172	72	205	48	151	42	127	63
December	160	85	145	88	183	76	183	66	153	49	122	68
January	166	72	143	88	170	64	165	58	145	48	115	71
February	118	78	120	79	143	56	128	60	128	48	85	78
March	123	106	117	95	151	61	130	62	129	52	105	84
April	97	116	98	103	142	72	112	60	128	46	82	81
May	63	108	47	130	89	62	70	68	89	55	53	90
June	13	194	11	139	33	65	17	85	22	89	20	110
Total or weighted av.	1,012	101	998	96	1,260	71	1,251	59	1,147	51	904	76
MONTH	1934-35		1935-36		1936-37		1937-38		1938-39		1939-40	
	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>	<i>Car-lots</i>	<i>Cents</i>
July	15	98	22	99	20	99	19	106	32	45	37	65
August	22	112	22	116	20	101	18	101	31	72	46	57
September	45	91	45	95	65	76	34	99	79	66	108	51
October	137	74	178	62	120	72	168	70	166	54	145	61
November	140	69	193	54	126	72	129	79	160	58	120	58
December	137	59	156	59	124	73	114	68	143	58	117	56
January	141	60	136	60	103	74	125	61	132	54	119	54
February	107	60	107	64	95	74	136	56	129	52	115	54
March	124	64	145	65	123	73	153	57	127	53	133	51
April	117	61	124	61	107	75	160	54	157	41	151	45
May	79	54	82	61	83	71	94	51	121	50	119	49
June	31	75	33	75	25	93	48	66	45	68	48	66
Total or weighted av.	1,095	66	1,243	62	1,011	75	1,198	65	1,322	54	1,258	54

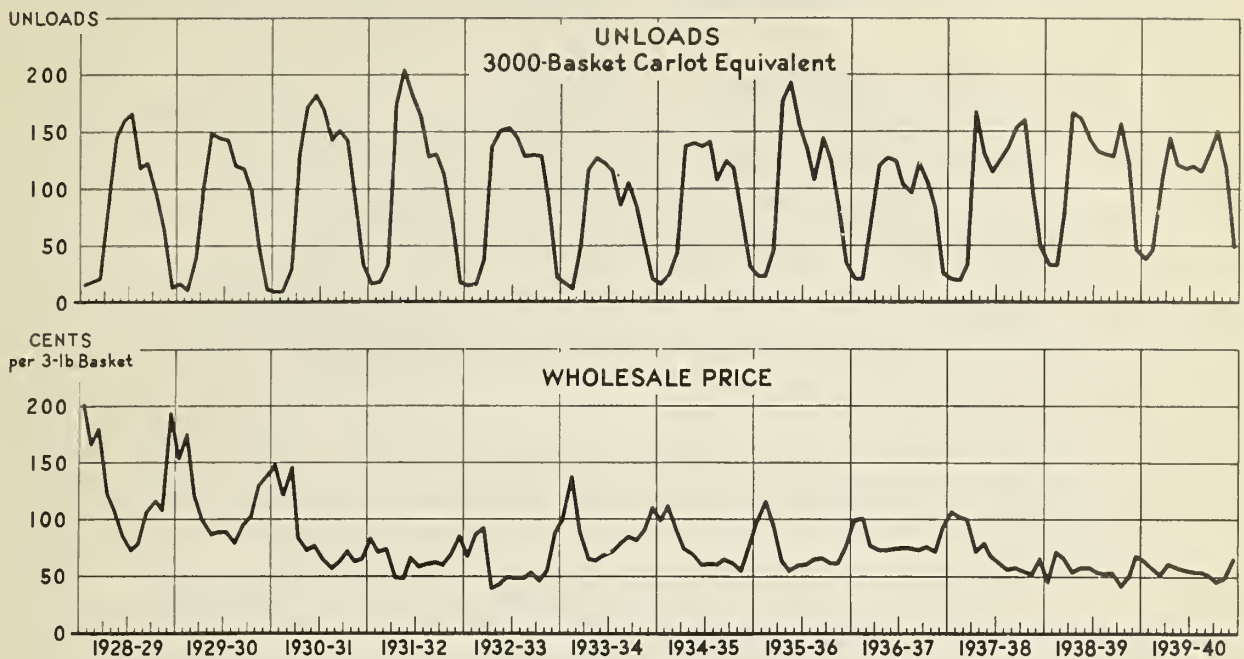
SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture for New York City from 1928 to 1939, and monthly reports, January to June 1940. Prices are top quotations on second grade of white mushrooms from the Producers' Price Current, 1928-1940.

<sup>1/</sup> Both truck and express receipts are included, unload figures are in carlot equivalents of 3,000 3-lb. baskets.

<sup>2/</sup> This price was calculated by averaging the top quotations on the second grade of white mushrooms quoted in the Producers' Price Current for all Wednesdays in the month.



FIGURE 2  
MONTHLY UNLOADS OF MUSHROOMS AND AVERAGE MONTHLY WHOLESALE  
PRICE AT NEW YORK CITY, SEASONS 1928-29 TO 1939-40



In 1928, 1929 and 1930, monthly unloads of mushrooms at New York City were about 10 cars for each of the three summer months. During the two seasons, 1938-39 and 1939-40, unloads have been 30 and 40 carloads a month for each of the three summer months, and the summer volume has increased quite noticeably each year. In addition, the monthly unload data show strikingly the gradual change in the mushroom industry from a one-crop to a two-crop system. The second crop "hump" which is barely noticeable in 1928-29 and 1929-30 gradually increases in size until in 1939-40 it is larger than the first crop "hump" (see figure 2).

#### WEEKLY PRICES, 1939-40 SEASON

Certain additional facts are brought to light by a more detailed examination of weekly prices for different grades of mushrooms and their relation to average supplies per day. The graphic picture of weekly prices and quantities last season (figure 3) shows that in spite of a low wholesale price throughout the greater part of the season for most mushrooms, prices quoted for a "few marks of extra fancy and special" mushrooms from October to

May were usually about 20 cents per 3-pound basket higher than prices for other "extra fancy and special" mushrooms. The higher prices quoted for these "few marks of extra fancy and special" mushrooms show that the New York market will pay a premium for quality.

Some significance may be attached to the large difference between prices of "extra fancy and special" and "fancy and medium" mushrooms during the summer months, and the very slight difference between prices of these two grades during the winter. The average prices of the "fancy and medium" grade were equal to those of the "extra fancy and special" grade during a few weeks last winter and were even higher one week. Since most of the mushrooms on the New York market during the winter months are from the Kennett Square area, support is given to statements made by many wholesale receivers to the effect that grades stamped on baskets from the Kennett Square area meant little or nothing.

Also noticeable in figure 3 are the approximate changes in weekly prices which occur with marked changes in average daily receipts during the week. In addition, the ef-

fect of pre-holiday trade on mushroom prices is evident, especially the effect of Thanksgiving. Even with large receipts, prices advanced perceptibly during the 3 weeks prior to Thanksgiving.

#### MUSHROOM UNLOADS AT NEW YORK CITY

The quantity of mushrooms unloaded at New York City during the last 2 seasons has undoubtedly been one cause of low prices. Pennsylvania growers, however, are not solely responsible for this situation. Mushroom unloads at New York City from States other than Pennsylvania increased from 65 carloads for the 1937-38 season to 261 carloads during the 1938-39 season and to 269 carloads in 1939-40 (table 3 and figure 4). In other words, mushrooms from Pennsylvania unloaded at New York City decreased from 95 percent of the total in 1937-38 to 80 percent in 1938-39 and to 79 percent in 1939-40.

Table 3

#### UNLOADS OF MUSHROOMS <sup>1/</sup> AT NEW YORK CITY FROM PENNSYLVANIA AND FROM OTHER STATES, SEASONS 1928-29 TO 1939-40

SEASON	UNLOADS AT NEW YORK CITY FROM - <sup>2/</sup>			PROPORTION OF UN- LOADS FROM -		
	PENN- SYL- VANIA	OTHER STATES	ALL STATES	PENN- SYL- VANIA	OTHER STATES	ALL STATES
	<i>Carloads</i>			<i>Percent</i>		
1928-29	924	88	1,012	91	9	100
1929-30	937	61	998	94	6	100
1930-31	1,113	147	1,260	88	12	100
1931-32	1,150	101	1,251	92	8	100
1932-33	1,054	93	1,147	92	8	100
1933-34	830	74	904	92	8	100
1934-35	1,052	44	1,096	96	4	100
1935-36	1,177	66	1,243	95	5	100
1936-37	937	74	1,011	93	7	100
1937-38	1,133	65	1,198	95	5	100
1938-39	1,061	261	1,322	80	20	100
1939-40	989	269	1,258	79	21	100

SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture for New York City, 1928 to 1939, and monthly reports January to June 1940.

<sup>1/</sup> Both express and truck shipments are included for all seasons.

<sup>2/</sup> Carlot equivalents of 3,000 3-lb. baskets.

The relatively high prices for mushrooms on the New York City market in 1936-37 were largely a result of reduced unloads from Pennsylvania. In 1937-38 shipments to New York City from Pennsylvania increased nearly 200 carloads over the previous season, while shipments from all other States decreased slightly. The average wholesale price for the season dropped from 75 to 65 cents. The following season, 1938-39, shipments to New York City from Pennsylvania decreased slightly, and prices would probably have remained at least as high as they were the previous season had not unloads from other States increased sharply to 261 carloads. This increase was largely responsible for the drop in the average seasonal wholesale price from 65 cents to 54 cents. Last season, 1939-40, Pennsylvania mushroom growers again reduced their shipments to New York City, but all to no avail. Growers from other States increased their shipments and the average seasonal wholesale price remained at 54 cents, despite the fact that total unloads from all States were less than those of the previous season. With unloads at such a high level, evidently a slight reduction does not result in improved prices.

As is generally known in the Kennett Square area, Hudson Valley mushrooms provide the main competition for Pennsylvania mushrooms in the New York City market. The expansion in production in the Hudson Valley since 1937 has been exceedingly rapid. During the summer months mushroom shipments from one large grower in the Hudson Valley are about 50 percent of all mushrooms received on the New York City market. Out of 269 carlot equivalents of mushrooms from States other than Pennsylvania unloaded at New York City during the 1939-40 season, 267 were from New York State (table 4). Nearly all of these were from the Hudson Valley of New York. In 1938-39, 234 cars out of 260 cars from States other than Pennsylvania originated in New York State.

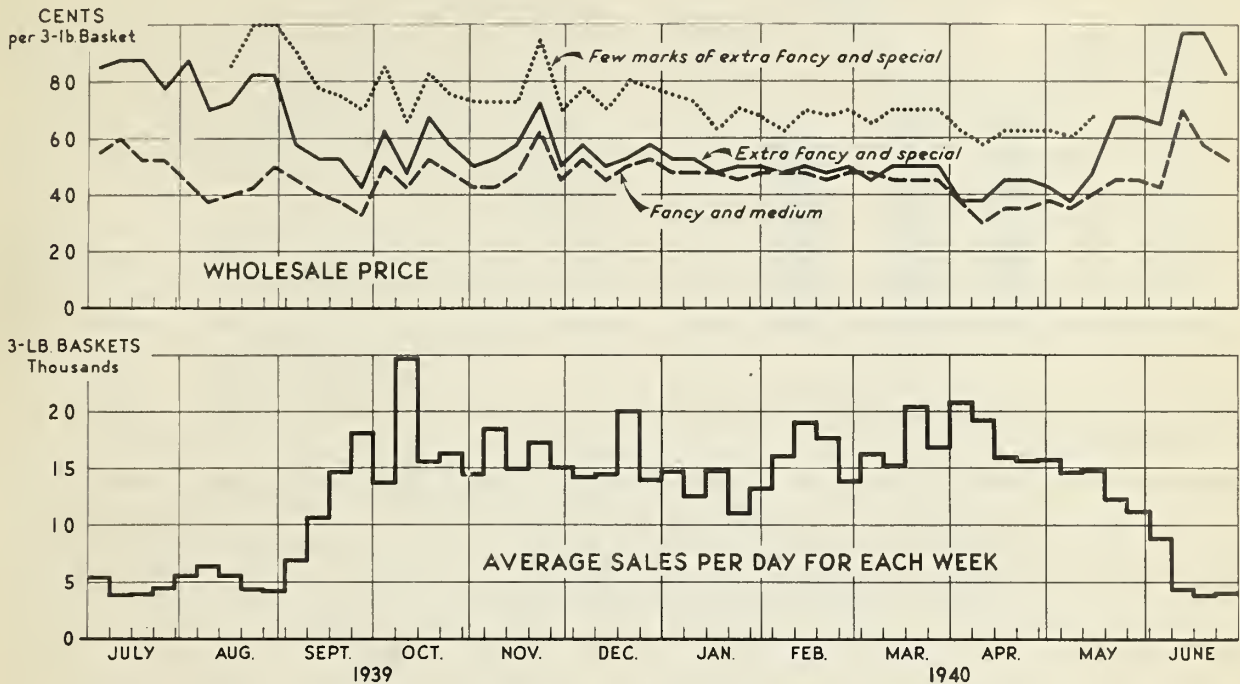
#### EXPRESS AND TRUCK ARRIVALS AT NEW YORK

Only 22 carlot equivalents of Pennsylvania mushrooms were shipped to New York by express during the 1930-31 season. This volume shipped by express increased to 138 car-



FIGURE 3

# WEEKLY FLUCTUATIONS IN PRICES FOR VARIOUS GRADES OF MUSHROOMS, AND AVERAGE VOLUME SOLD PER DAY FOR EACH WEEK AT NEW YORK CITY, JULY 1, 1939 TO JUNE 30, 1940



loads by the 1935-36 season, was considerably less the following two seasons, and then practically doubled (an increase from 95 to 186 carloads) during the 1938-39 season (table 4). Last season, 1939-40, another increase in express shipments from Pennsylvania in New York City occurred (an increase from 186 to 231 carloads). Information from local buyers and others in the Kennett Square area indicates that express shipments to New York City are going almost entirely to chain stores. The proportion of New York State mushrooms shipped by express to New York City decreased from more than 40 percent in 1930-31 to about 3 percent in 1939-40.

## UNLOADS AT PHILADELPHIA

Philadelphia is the second largest city market for fresh mushrooms from the Kennett Square area. Mushroom unloads at this city for the years figures are available show a marked increase. For the 1932 calendar year, the first year figures were compiled for mushroom unloads at Philadelphia, 188 carlot equivalents arrived (table 5 and figure 5).

Of these, all but 12 cars were from Pennsylvania. Mushroom unload figures for Philadelphia were not available again until 1936, and in that year unloads were equivalent to 247 carloads, 214 of which were from Pennsylvania. By 1939, mushroom unloads at Philadelphia had increased to 301 carlot equivalents.

## UNLOADS AT BOSTON

Many cities in New England, up-State New York, western Pennsylvania and elsewhere in the East, were formerly outlets for a sizable volume of Kennett Square mushrooms. Recently, however, numerous commercial mushroom producers have built plants near several of these cities and are supplying a large part of the local market requirements. Mushroom unloads at Boston for the calendar years 1925 to 1939, inclusive, illustrate this trend (table 6 and figure 6). It will be observed from table 6 that first New York State mushrooms supplanted Pennsylvania mushrooms in the Boston market and that later the market was taken over by local growers.

Table 4  
UNLOADS OF MUSHROOMS AT NEW YORK CITY BY STATE OF ORIGIN  
AND METHOD OF TRANSPORTATION,  
SEASONS 1930-31 TO 1939-40

SEASON	UNLOADS AT NEW YORK CITY <sup>1/</sup> FROM -											
	PENNSYLVANIA			NEW YORK			NEW JERSEY, DELAWARE AND MARYLAND COMBINED			ALL STATES		
	EXPRESS	TRUCK	TOTAL	EXPRESS	TRUCK	TOTAL	EXPRESS	TRUCK	TOTAL	EXPRESS	TRUCK	TOTAL
	<i>Carloads</i>											
1930-31	22	1,091	1,113	58	82	140		7	7	80	1,180	1,260
1931-32	45	1,105	1,150	25	61	86		15	15	70	1,181	1,251
1932-33	42	1,012	1,054	13	75	88	1	4	5	56	1,091	1,147
1933-34	64	766	830	23	48	71	1	2	3	88	818	904
1934-35	83	969	1,052	19	16	35		9	9	102	994	1,096
1935-36	138	1,039	1,177	16	36	52		14	14	154	1,089	1,243
1936-37	93	844	937	9	62	71	3		3	105	906	1,011
1937-38	95	1,038	1,133	16	49	65				111	1,087	1,198
1938-39	186	875	1,061	14	220	234		27	27	200	1,122	1,322
1939-40	231	758	989	8	259	267	1	1	2	240	1,018	1,258

SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture for New York City 1930 to 1939, and monthly reports January to June, 1940.

<sup>1/</sup> Carlot equivalents of 3,000 3-lb. baskets.

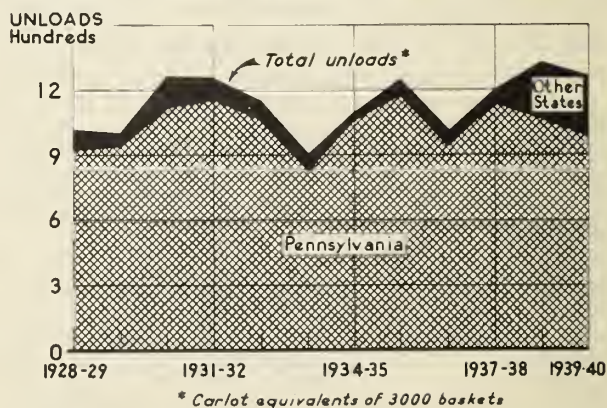
Between 1925 and 1931, the volume of Pennsylvania mushrooms on the Boston market was considerably greater than the volume from all other States combined. Shipments from New York State began to increase rapidly in 1928 and gradually overshadowed unloads from Pennsylvania so that by 1935 unloads of New York State mushrooms were considerably greater than unloads from all other States combined. In 1939, however, nearby trucked-in mushrooms increased in volume to such an extent that shipments from other States were a minor factor in the Boston market.

#### TREND IN MUSHROOM PRODUCTION

While unloads of fresh mushrooms at important city markets are an indication of changes in mushroom production, it is well to examine data on total mushroom production in the United States and in the Kennett Square

area. The only data available <sup>2/</sup> indicate that the total production of mushrooms in the United States increased from a little less

FIGURE 4  
UNLOADS OF MUSHROOMS AT NEW YORK CITY FROM PENNSYLVANIA AND FROM OTHER STATES, SEASONS 1928-29 TO 1939-40



<sup>2/</sup> Maule, W. W., and Hannum, L. C., "In the matter of Trade Agreement Negotiations between the United States and the Republic of France and Its Colonies, Dependencies, and Protectorates other than Morocco." 24 pp. Report to the Committee for Reciprocity Information, United States Tariff Commission, Washington, D. C. (Mimeographed). See pp. 7 and 8.



than 10,000,000 pounds in 1922 to 17,500,000 pounds in 1929, and to 29,471,000 pounds in 1934 (figure 7). If production has continued to increase at the same rate, total production in 1939 was at least 40,000,000 pounds. It was estimated that Pennsylvania produced 20,000,000 pounds in 1934 of the total United States crop of 29,471,000 pounds, or about 70 percent. Considerably more than 20,000,000 pounds must have been produced in Pennsylvania in 1939. In fact, there is general agreement that production in the Kennett Square area was between 20 and 21 million pounds. The Temple area and other local districts produce approximately 2 million pounds.

#### COMPETITION FROM CANNED MUSHROOMS AND MUSHROOM SOUP

In recent years a large volume of mushrooms has been diverted from fresh market channels and canned or used in the preparation of canned mushroom soup. Undoubtedly such diversion has resulted in prices for fresh mushrooms considerably higher than would otherwise have been obtained. In addition, canning has probably helped considerably in preventing extreme price fluctuations by re-

Table 5

#### UNLOADS OF MUSHROOMS AT PHILADELPHIA BY STATE OF ORIGIN, 1932, and 1936-39 <sup>1/</sup>

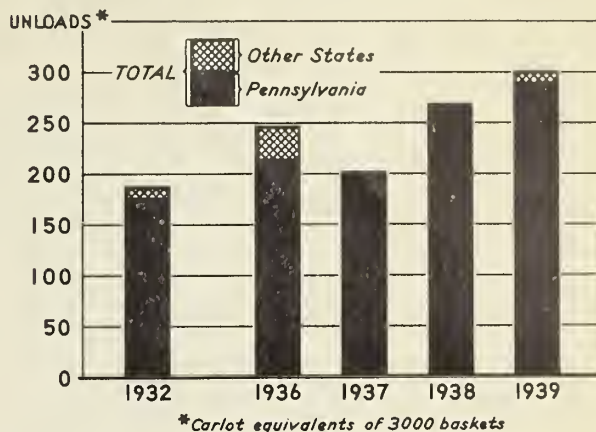
YEAR	UNLOADS AT PHILADELPHIA <sup>2/</sup>			
	PENNSYLVANIA	NEW JERSEY	MARYLAND	ALL STATES
	<i>Carloads</i>			
1932	176	10	2	188
1936	214	33	-	247
1937	201	1	-	202
1938	265	4	-	269
1939	289	12	-	301

SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture for Philadelphia 1932 and 1936 to 1939.

<sup>1/</sup> These are the only years for which yearly unload figures for mushrooms at Philadelphia are available since they are the only years in which truck receipts were obtained, and nearly all arrivals of mushrooms at Philadelphia are by truck.

<sup>2/</sup> Carlot equivalents of 3,000 3-lb. baskets arriving by truck.

FIGURE 5  
UNLOADS OF MUSHROOMS AT PHILADELPHIA  
1932, AND 1936 TO 1939



ducing the supply of fresh mushrooms during short periods of unusually heavy production. The large volume of mushrooms canned in recent years has resulted, however, in lowered prices for canned mushrooms and mushroom soup. Even though the price of fresh mushrooms has fallen, even more perhaps than the price of the canned product, the important thing seems to be that the price of canned mushrooms is now low enough to "fit the pocketbook" of many consumers who either do not know how, or do not wish to go to the trouble of preparing fresh mushrooms. The rate of increase in the volume of mushroom soup canned seems to have been even more rapid than the increase in volume of whole or sliced mushrooms canned. It is apparent, therefore, that canned mushrooms and mushroom soup are a limiting factor in present-day demand for fresh mushrooms.

All this does not in any way detract from the benefits of canning to the industry, but it is another indication of overproduction of mushrooms in relation to demand. It is entirely possible, however, that the lower prices received for fresh mushrooms on the New York City market in 1939-40 as compared with 10 years earlier are due in part to the increased use of canned mushrooms and mushroom soup. The situation suggests that efforts to stimulate and maintain demand for both the fresh and canned products are urgently needed.

Table 6  
UNLOADS OF MUSHROOMS AT BOSTON BY STATE OF ORIGIN  
AND METHOD OF TRANSPORTATION,  
1925-39

YEAR	UNLOADS AT BOSTON <sup>1/</sup> FROM-					
	NEW YORK BY EXPRESS	PENNSYLVANIA BY EXPRESS	ALL OTHER STATES BY EXPRESS	NEARBY TRUCKED-IN	TRUCKED-IN, LONG DISTANCE	TOTAL BY EXPRESS AND TRUCK - ALL STATES
	<i>Carloads</i>					
1925	1	47	15	-	-	64
1926	4	59	8	-	-	71
1927	10	56	4	7	-	77
1928	21	56	-	-	-	78
1929	21	61	-	-	-	82
1930	28	68	1	-	-	98
1931	34	80	6	2	1	123
1932	22	60	12	26	3	124
1933	45	50	6	-	-	101
1934	47	33	1	-	-	81
1935	69	16	1	-	1	87
1936	61	18	2	-	-	81
1937	38	8	1	-	-	47
1938	25	17	1	15	4	62
1939	10	1	-	60	-	71

SOURCE OF DATA: Annual Fruit and Vegetable Unload Reports of the U. S. Department of Agriculture for Boston, 1925-39.

<sup>1/</sup> Carlot equivalents of 3,000 3-lb. baskets.

#### COST OF PRODUCTION

Cost of production has declined in the Kennett Square area, but not in the same proportion as prices. Notable improvements have been made in methods of production, quality of spawn, control of insects and diseases, and in many other ways. These improvements have increased appreciably the average production per square foot of bed space planted. Nevertheless, information supplied by growers interviewed in the Kennett Square area indicates that for growers who use mostly hired labor, keep their plants in repair, and have to pay interest on indebtedness for their plants, the actual cash cost of producing mushrooms last season with yields between 1.6 and 1.8 pounds per square foot was between 15 and 16.5 cents per pound.

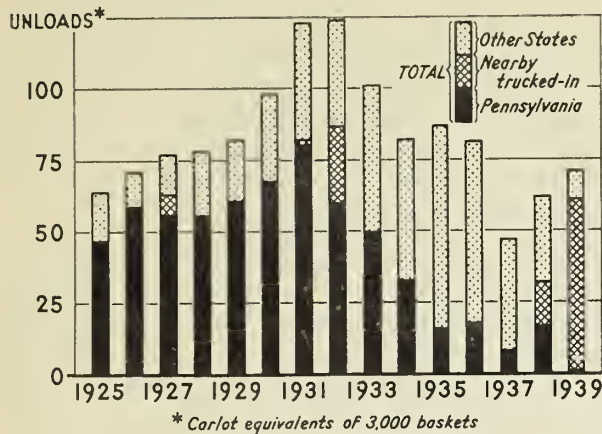
The only figures on cost of production in the Kennett Square area in past years <sup>3/</sup> with which the figures above can be compared indicate that in 1930 the cost of producing mushrooms in Chester County, Pennsylvania, based on estimates of several commercial growers was 26 cents per pound when the yield was 1 pound per square foot, and 18.7 cents per pound when the yield was 1.5 pounds per square foot. Since the estimates of 15 to 16.5 cents per pound for 1939-40 are for yields between 1.6 and 1.8 pounds per square foot, it would appear that reductions in the cost of producing mushrooms in the Kennett Square area since 1930 have been due to general increases in yields.

Many growers whose production is relatively small operate their plants almost en-

<sup>3/</sup> Lambert, Edmund B., "Mushroom Growing in the United States." U. S. Dept. Agr. Circ. 251. 35 pp., illus., 1932.



FIGURE 6  
UNLOADS OF MUSHROOMS AT BOSTON  
1925-39



tirely with their own or with family labor, do not repair their mushroom houses as often as they would like to, and may not have to pay interest on indebtedness. Such growers can produce mushrooms at an actual cash cost below the figures given. Possibly a majority of the growers in the area have been depending on this margin almost entirely for any income they have derived during the last 2 seasons. If a fair wage had been paid for all labor devoted to producing mushrooms, interest paid on all investments involved, charges made for depreciation and necessary repairs, the cost of producing mushrooms might have been 3 or 4 cents per pound higher than average net returns to growers during the 1938-39 and 1939-40 seasons.

#### SELECTION OF GROWERS INTERVIEWED

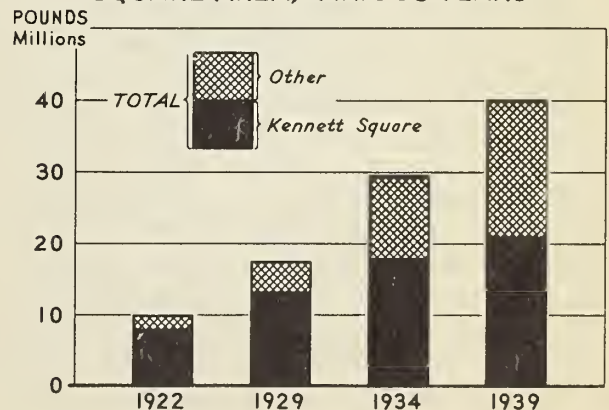
The Mushroom Growers Cooperative Association, as well as other spawn and supply dealers, truck operators, canners, and growers, cooperated by furnishing information which assisted in the selection of the sample and by furnishing transportation from farm to farm. The most important consideration in selecting the sample of growers to be interviewed was to have represented all the various grower groups in the area. It was also important that growers interviewed should represent each size of business group in about the same proportion as they are found among all growers in the area. However, not quite enough growers with small size businesses were included in the sample.

The 46 growers who furnished the data summarized in tables which follow represented about 12 percent of the estimated 394 mushroom growers in the Kennett Square area. They had a total equivalent of 419 single mushroom houses, however, or 19 percent of the estimated equivalent of 2,200 single mushroom houses owned by all growers in the area. Furthermore, the 12 percent of the growers in the sample sold in all slightly more than 4 million pounds of mushrooms during the 1939-40 season, or about 19 percent of the approximate 21 million pounds estimated as the total production of the area.

In most of the tables growers interviewed have been divided into four groups on the basis of square feet planted to mushrooms. The tables, therefore, provide averages which may be weighted by the number of growers in each size-of-business group to arrive at indicated averages for all growers. It should be kept in mind that these tables are based in part on estimates by growers. These estimates, however, are believed to be reasonably reliable and accurate.

The range in the number of square feet of bed space planted to mushrooms during the 1939-40 season by these 46 growers was from 11,880 to 292,000 square feet. Two growers interviewed whose production was much above the average are not included. Eleven of the 46 growers planted less than 25,000 square feet of bed space, 16 planted between 25,000 and 50,000 square feet, 12 between 50,000 and

FIGURE 7  
TOTAL PRODUCTION OF MUSHROOMS IN THE  
UNITED STATES AND IN THE KENNETT  
SQUARE AREA, VARIOUS YEARS



75,000, and 7 more than 75,000 square feet during 1939-40 (table 7). The 11 growers, or 24 percent of the sample, who planted less than 25,000 square feet each, accounted for only about 9 percent of the total bed space planted to mushrooms by the 46 growers. The 7 growers, or 15 percent, who planted more than 75,000 square feet each, accounted for nearly 40 percent of the total planted by all 46 growers.

The quantity of mushrooms sold during the season by each of the 46 growers ranged from 7,900 to 200,000 baskets. Twelve sold less than 15,000 baskets, 19 between 15,000 and 30,000, 10 between 30,000 and 45,000, and 5 sold 45,000 baskets or more (table 8).

age. If as large an area was planted to mushrooms in Pennsylvania in 1939-40 as in 1934, the total Pennsylvania production would be approximately 25 million pounds. Therefore, 21 million pounds appears to be a conservative estimate of production in the Kennett Square area during 1939-40. Undoubtedly, the fact that two crops a year are more common now than in 1934 accounts to a considerable degree for the increased production.

As might be expected, substantial variations in yields were found, ranging from 0.91 to 2.27 pounds per square foot of bed space planted. Eight growers had yields less than 1.25 pounds per square foot, 10 between 1.25 and 1.49 pounds, 7 between 1.50 and 1.74, 14

Table 7

AVERAGE NUMBER OF SQUARE FEET OF BED SPACE REPORTED PLANTED TO MUSHROOMS,  
JULY 1, 1939 TO JUNE 30, 1940, BY 46 GROWERS IN THE  
KENNETT SQUARE AREA OF PENNSYLVANIA

RANGE IN SQUARE FEET OF BED SPACE PLANTED TO MUSHROOMS	GROWERS	PROPORTION OF GROWERS	AVERAGE BED SPACE PER GROWER <sup>1/</sup>	TOTAL BED SPACE, ALL GROWERS IN GROUP	PROPORTION OF TOTAL BED SPACE
	<i>Number</i>	<i>Percent</i>	<i>Sq. ft.</i>	<i>Sq. ft.</i>	<i>Percent</i>
Less than 25,000	11	24	19,886	225,096	9
25,000 - 49,999	16	35	37,470	599,520	24
50,000 - 74,999	12	26	59,122	709,460	28
75,000 or more	7	15	138,659	970,616	39
Total or average	46	100	54,450	2,504,692	100

<sup>1/</sup> Range: 11,880 sq. ft. to 292,000 sq. ft.

#### YIELD OF MUSHROOMS

The average yield of mushrooms in Pennsylvania was estimated to be about 1.33 pounds per square foot in 1934 <sup>4/</sup>. The average yield per square foot of bed space planted between July 1, 1939, and July 1, 1940, by these 46 growers was 1.61 pounds (table 9). It would appear, as will be shown later in this report, that the average for the entire Kennett Square area was probably more than 1.61 pounds per square foot last season, because growers whose operations are relatively small are not adequately represented in the sample. Perhaps 1.65 pounds would be close to a general aver-

between 1.75 and 1.99, and 7 had yields of more than 2 pounds per square foot. Yields, of course, were the principal factor affecting production costs per pound, and it is clear that a grower whose yields are unduly low has little or no chance to make a profit.

There are many different factors affecting the yield obtained by an individual grower. Although the size of his business may or may not be one of these factors, the survey shows that the 11 growers who planted less than 25,000 square feet of bed space had an average yield of 1.85 pounds per square foot, while growers with 75,000 or more square feet

<sup>4/</sup> See reference cited in footnote 2, page 12.



averaged 1.69 pounds per square foot. The two intermediate groups reported yields considerably lower, 1.54 and 1.49 pounds per square foot (table 10).

## MARKETING INFORMATION REPORTED BY GROWERS

### DISTRIBUTION OF SALES

Exactly 50 percent of all mushrooms sold by these 46 growers between July 1, 1939, and July 1, 1940, was reported to have been sold at the farm, slightly less than 50 percent shipped on consignment to commission merchants in various cities, and the small part remaining on a direct delivered-sales basis (table 11). About one-third of the 50 percent sold at the farm was to soup companies, about two-fifths to canneries, one-fifth to chain-store buyers, and one-tenth to local buyers. By far the largest part of the 49.7 percent shipped on consignment to various city markets went to New York City. Other markets received insignificant quantities.

All the 46 growers sold some of their mushrooms at the farm, and all except one shipped some on consignment to city commission merchants. Thirty-nine of the 46 growers sold to soup companies at the farm, 22 to canneries, 11 to chain-store buyers, and 10 to local buyers. More growers shipped to New York City on consignment than to any other city -- 45 to New York as compared with 17 to

Philadelphia, 3 to Newark, 2 to Washington, and 1 to Boston.

### SALES BY GRADE

Grade designations for mushrooms are plentiful in the Kennett Square area, and whenever another grade is thought necessary, the growers combine two existing designations. For example, nearly a third of the mushrooms going to chain-store buyers at the farm were called "special mediums" or "fancy mediums" (table 12). Grade designations of mushrooms sold to a few of the important outlets were as follows: Of those sold to soup companies at the farm, about 30 percent were mixed "mediums" and "buttons" and 70 percent "buttons," of those sold to canneries at the farm, about 81 percent were mixed "mediums" and "buttons" and 19 percent "buttons," and mushrooms sold to chain-store buyers at the farm, that were not called "special mediums" or "fancy mediums," were simply "mediums." About 45 percent of the mushrooms shipped to New York City on consignment were called "specials," 3 percent "extra fancy," about 16 percent "fancy," 27 percent "mediums," about 4 percent "buttons" and 4 percent "opens and spots."

### RELATION OF SIZE OF BUSINESS TO SALES DISTRIBUTION

The size of a grower's business naturally affects the distribution of his sales. Chain-store buyers, as well as others pur-

Table 8  
AVERAGE NUMBER OF BASKETS OF MUSHROOMS SOLD BY 46 GROWERS IN  
THE KENNETT SQUARE AREA OF PENNSYLVANIA,  
JULY 1, 1939, TO JUNE 30, 1940

MUSHROOMS SOLD JULY 1, 1939 TO JUNE 30, 1940	GROWERS	PROPORTION OF GROWERS	AVERAGE VOLUME SOLD PER GROWER <sup>1/</sup>	TOTAL VOLUME SOLD BY ALL GROWERS IN GROUP	PROPORTION OF TOTAL VOLUME SOLD BY EACH GROUP
3-lb. Baskets	Number	Percent	3-lb. Baskets		Percent
less than 15,000	12	26	12,130	145,559	11
15,000 - 29,999	19	41	19,962	379,277	28
30,000 - 44,999	10	22	35,183	351,833	26
45,000 or more	5	11	94,200	471,000	35
Total or average	46	100	29,297	1,347,669	100

<sup>1/</sup> Range: 7,900 baskets to 200,000 baskets.

Table 9

YIELD OF MUSHROOMS IN POUNDS SOLD PER SQUARE FOOT OF BED SPACE  
PLANTED TO MUSHROOMS, JULY 1, 1939 TO JUNE 30, 1940, AS REPORTED BY  
46 GROWERS IN THE KENNETT SQUARE AREA OF PENNSYLVANIA

RANGE IN POUNDS OF MUSHROOMS SOLD PER SQUARE FOOT OF BED SPACE <sup>1/</sup>	GROWERS	PROPORTION OF GROWERS	TOTAL SPACE PLANTED BY ALL GROWERS IN GROUP	TOTAL MUSH- ROOMS SOLD BY ALL GROWERS IN GROUP	AVERAGE YIELD FOR EACH GROUP
	<i>Number</i>	<i>Percent</i>	<i>Sq. ft.</i>	<i>Pounds</i>	<i>Lbs. per sq. ft.</i>
Less than 1.25	8	17	508,748	529,977	1.04
1.25 - 1.49	10	22	498,152	678,000	1.36
1.50 - 1.74	7	15	238,908	394,200	1.65
1.75 - 1.99	14	31	831,380	1,550,499	1.86
2.00 or more	7	15	427,504	890,331	2.08
Total or average	46	100	2,504,692	4,043,007	1.61

<sup>1/</sup> Range: 0.91 lbs. per sq. ft. to 2.27 lbs. per sq. ft.

chasing at the farms, buy most frequently from growers with a relatively large supply. Growers tend to ship on consignment to city markets the mushrooms that they cannot sell at the farm, and, consequently, we find that the grower whose production is smallest consigns the largest proportion of his crop. The growers interviewed who planted on the average less than 25,000 square feet in 1939-40 sold only about one-sixth of their production at the farm (table 13). The next three size groups sold increasingly larger proportions at the farm, while the group that averaged 75,000 square feet or more sold two-thirds of their crop at the farm.

The proportions sold by each group to soup companies did not vary widely. Apparently, soup companies do not select the growers from whom they wish to buy to the same extent as chain-store buyers, local buyers, or canneries. Canneries obtained a surprisingly small share of mushrooms from growers who planted less than 25,000 square feet. None of the growers in this group sold any mushrooms to chain-store buyers, while the proportions sold to chain-store buyers by the upper three size groups were 8, 12, and approximately 14 percent, respectively. Growers in the group with the largest average bed space sold a much larger proportion of their mushrooms to local buyers than those in other groups.

#### AVERAGE NET PRICES

Growers interviewed were asked to make a careful estimate of the average gross price received during 1939-40 for each grade of mushrooms sold to various buyers or outlets. Costs such as transportation, commissions, baskets, wire and paper were deducted from the gross price to make it equivalent to a net price at the farm.

These average net prices are subject to certain limitations. No allowance was made for time of sale which is responsible to some degree for variations in price. Most of the growers interviewed in the area, however, produced two crops and for that reason all of them were likely to sell at about the same rate throughout the season. In addition, it must be conceded that there may be a bias in price estimates furnished by growers. The survey was made at the end of a season in which very low prices were received and these prices were lowest at that time. It was natural that growers should remember vividly their most recent returns and give these prices undue weight in formulating an estimated seasonal price. In addition, a few growers may have reported prices that were somewhat low in order to emphasize the unfavorable price situation. Some evidence of this bias appears in prices reported for sales to soup companies.



Table 10

SIZE OF BUSINESS AS MEASURED BY THE NUMBER OF SQUARE FEET OF BED SPACE PLANTED, RELATED TO YIELD OF MUSHROOMS, JULY 1, 1939, TO JUNE 30, 1940, AS REPORTED BY 46 GROWERS IN THE KENNETT SQUARE AREA OF PENNSYLVANIA

RANGE IN SQUARE FEET OF BED SPACE PLANTED TO MUSHROOMS	GROWERS WITH SPECIFIED BED SPACE	AVERAGE YIELD PER SQUARE FOOT FOR GROUP
	<i>Number</i>	<i>Pounds</i>
Less than 25,000	11	1.85
25,000 - 49,999	16	1.54
50,000 - 74,999	12	1.49
75,000 or more	7	1.69
Total or average	46	1.61

Records of one of the large soup companies show that they paid on the average 42.65 cents per 3-pound basket in the Kennett Square area during the 1939-40 season. The growers interviewed reported weighted average seasonal net returns for mushrooms sold to soup companies of only 37.7 cents per 3-pound basket (table 14). Mushrooms sold to soup companies were packed partly in new and partly in second-hand baskets and growers' average cost was about 2.5 cents for each basket used. This amount added to 37.7 cents gives an average seasonal gross price of 40.2 cents for sales to soup companies as reported by the growers interviewed, or about 2.4 cents per basket less than the average shown by one soup company. Prices received from canneries, as reported by growers, are believed to be more nearly correct. The average seasonal net price growers reported for mushrooms sold to canneries was 40.6 cents per 3-pound basket.

Growers interviewed who sold to chain-store buyers at the farm reported an average seasonal net price of 40.3 cents on such sales. It might be worth while adding at this point that the only sales of mushrooms in one-pound baskets reported were to chain-store buyers. About 106,000 pounds of medium grade mushrooms were reported sold to chain-store buyers in one-pound baskets and 195,000 pounds of medi-

ums were sold to such buyers in 3-pound baskets. The average net price reported for mushrooms sold in 1-pound baskets was 13.73 cents a pound, equivalent to 41.2 cents per 3-pound basket, compared with 39.1 cents for mushrooms sold to the same buyers in 3-pound baskets. 5/ Growers who sold in 1-pound baskets said that buyers had difficulty finding growers willing to take the time and care necessary to pack these small baskets. For this reason, the buyers had to pay a premium over the additional cost of the baskets to growers for packing in 1-pound baskets. Such buyers could afford to pay this premium because they got a higher resale price per pound for mushrooms packed in the smaller size basket.

The average of seasonal net prices reported for mushrooms consigned to city markets was 34.9 cents per 3-pound basket. Shipments to New York City made up by far the greater part of consignment sales and the average seasonal net price there was 34.9 cents. The small volume shipped on consignment to Philadelphia and Newark returned 3 or 4 cents less than this, and the even smaller volume shipped to Washington and Boston about 12.5 cents more than the average price.

Average seasonal net prices received by the growers interviewed for various grades of mushrooms sold in different ways are included in table 14. The volume sold, however, is so small in some cases that the average prices have little significance. Table 12 may be referred to for the purpose of determining in which cases the volume is too small for the prices to be significant.

#### PRICES RECEIVED IN THE OXFORD DISTRICT

Practically all commission merchants interviewed in the various city markets stated, in effect, that if all growers in the Kennett Square area sold a pack as reliable and well graded as that of growers in the Oxford district, prices paid for fresh mushrooms would have been materially higher than they were in

5/ One new 3-pound basket, plus wire and paper to go with it, cost approximately 3.5 cents last season. Three 1-pound baskets, plus wire and paper, cost about 8.6 cents.

Table 11  
DISTRIBUTION OF SALES AND NUMBER OF GROWERS WHO SOLD MUSHROOMS  
IN VARIOUS WAYS, AS REPORTED BY 46 GROWERS IN THE KENNETT SQUARE  
AREA OF PENNSYLVANIA  
JULY 1, 1939 TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	VOLUME OF MUSHROOMS	PROPORTION OF TOTAL VOLUME	GROWERS REPORTING SALES TO EACH OUTLET
	<i>3-lb. Baskets</i>	<i>Percent</i>	<i>Number</i>
Sales at the farm to:			
Soup companies	212,450	15.8	39
Canneries	258,000	19.1	22
Chain-store buyers	143,092	10.6	11
Local buyers	60,850	4.5	10
Total sales at farm	674,392	50.0	46
Shipped on consignment to:			
New York City	566,352	42.0	45
Philadelphia	57,225	4.2	17
Newark	21,500	1.6	3
Washington	15,200	1.3	2
Boston	8,500	.6	1
Total consigned	668,777	49.7	45
Direct sales to:			
Southern cities	2,500	.2	1
Local retailers	2,000	.1	1
Total direct sales	4,500	.3	1
Total for all sales	1,347,669	100.0	46

1939-40. Repetition of this statement prompted an investigation of possible reasons for this preference.

Data obtained from eight growers surveyed in the Oxford district have been compared with similar data furnished by other growers in the area. It would appear that there are at least two significant reasons for the very marked buyer preference for mushrooms from the Oxford district. (1) Oxford growers graded 20.5 percent of all mushrooms they shipped to New York City on consignment as "buttons" or "opens and spots" (table 15). Other growers in the area put only 5.4 percent in these two lowest grades. (2) Nearly 70 percent of the mushrooms shipped on consignment to New York City by Oxford growers were marked either

"fancy" or "medium" grade. Of shipments to New York by other growers in the area, about 57 percent were marked "special," and only 37 percent "fancy" or "medium." None of the mushrooms shipped by the Oxford growers were sold as "special" and only about 11 percent as "extra fancy." The careful and conservative grading practices followed by Oxford growers paid dividends to the extent of 5.4 cents per 3-pound basket. Oxford growers averaged 39.2 cents as a seasonal net price for mushrooms shipped to New York City on consignment, while all other growers in the area averaged 33.8 cents per 3-pound basket.

Furthermore, for all sales at the farm, Oxford growers averaged 41.8 cents net, other growers 39.1 cents (table 16). Such a large



proportion of the volume sold by Oxford growers was shipped to New York City on consignment that sales to soup companies at the farm was the only other outlet to which an appreciable quantity of their mushrooms went. The average of net prices reported paid by soup companies to Oxford growers was 41.6 cents and to other growers 37.4 cents per 3-pound basket.

Six of the eight Oxford growers had less than 25,000 square feet planted to mushrooms in 1939-40. Because of this fact, a comparison is made with respect to distribution of sales and average net prices between these six Oxford growers and five growers in other districts who also planted less than 25,000 square feet (table 17). The average seasonal net price received by Oxford growers in 1939-40 was more than 5 cents a basket higher than the price received by the other five.

## GROWERS' OPINIONS REGARDING MARKETING PROBLEMS

Growers interviewed were asked what they considered the chief problems in marketing mushrooms. Most growers mentioned more than one but the problem mentioned most frequently was overproduction. This was stated by some growers as "too many refills," by others as "overproduction for the way mushrooms are distributed at present."

The problem mentioned by the second largest number of growers was, in effect, that there was "too much buying on the floor." In other words, they said growers sold too many mushrooms at the farm. Criticism in connection with this problem was directed partly at small truckers who buy at the farm, but mainly at chain-store buyers. A few growers mentioned variations of this alleged problem by making such statements as "chain buyers and soup companies set the price," "chains sell

Table 12  
DISTRIBUTION OF SALES BY VARIOUS GRADES OF MUSHROOMS AS REPORTED BY  
46 GROWERS IN THE KENNETT SQUARE AREA OF PENNSYLVANIA,  
JULY 1, 1939, TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	PROPORTION OF EACH GRADE SOLD IN SPECIFIED WAYS							
	SPECIAL	EXTRA FANCY	FANCY	MEDIUM	MIXED MEDIUM AND FANCY MEDIUM	MIXED MEDIUM AND BUTTONS	BUTTONS	OPENS AND SPOTS
	<i>Percent</i>							
Sales at the farm to:								
Soup companies	-	-	-	1.6	-	30.1	68.3	-
Canneries	-	-	-	-	-	81.3	18.7	-
Chain-store buyers	-	-	-	70.5	29.5	-	-	-
Local buyers	0.2	-	66.5	26.7	-	-	-	6.6
Total	<u>1/</u>	-	6.0	17.9	6.3	40.6	28.6	0.6
Shipped on consignment to:								
New York City	45.2	3.1	15.9	27.2	-	-	4.4	4.2
Philadelphia	0.5	-	1.1	97.7	-	-	-	0.7
Newark	18.6	-	-	9.3	-	27.9	16.3	27.9
Washington	92.1	-	2.6	-	-	-	-	5.3
Boston	94.1	-	-	-	-	-	-	5.9
Total	<u>42.2</u>	<u>2.6</u>	<u>13.6</u>	<u>31.8</u>	<u>-</u>	<u>0.9</u>	<u>4.2</u>	<u>4.7</u>
Average, all sales	21.3	1.3	9.8	24.7	3.1	20.8	16.4	2.6

1/ Less than 0.1 percent.

Table 13

SIZE OF BUSINESS 1/ IN RELATION TO THE DISTRIBUTION OF MUSHROOM SALES,  
AS REPORTED BY 46 GROWERS IN THE KENNETT SQUARE AREA OF PENNSYLVANIA,  
JULY 1, 1939, TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	PROPORTION OF TOTAL SOLD IN SPECIFIED WAY BY GROWERS WITH BED SPACE OF -			
	LESS THAN 25,000 SQUARE FEET	25,000- 49,999 SQUARE FEET	50,000- 74,999 SQUARE FEET	75,000 SQUARE FEET OR MORE
	<i>Percent</i>			
Sales at the farm to:				
Soup companies	12.9	15.2	13.6	18.2
Canneries	1.3	5.8	26.3	26.6
Chain-store buyers	-	8.0	12.3	13.7
Local buyers	1.6	4.1	0.3	8.2
Total sales at farm	15.8	33.1	52.5	66.7
Shipped on consignment to:				
New York City	75.5	54.4	42.9	26.0
Philadelphia	8.4	6.1	2.9	3.0
Newark	-	5.0	1.7	-
Washington	0.3	-	-	2.7
Boston	-	-	-	1.6
Total consigned	84.2	65.5	47.5	33.3
Direct sales to:				
Southern cities	-	0.8	-	-
Local retailers	-	0.6	-	-
Total direct sales	-	1.4	-	-
Total for all sales	100.0	100.0	100.0	100.0

1/ As measured by number of square feet planted.

mushrooms as loss leaders," and "there are too many buyers" in the area.

Other problems mentioned by some growers were: "Buyers play growers off against one another," "too much poor grading" in the Kennett Square area, "bad distribution" of Kennett Square mushrooms, "lack of working together" on the part of growers, "shipping to too many commission men," and "not enough advertising." "Price pooling" and other unethical practices by some commission merchants were mentioned by several growers and stressed by a few as very important. In this connection, some commission merchants interviewed accused other merchants of engaging in "price pooling," or reducing returns to growers who received high prices in order to increase returns to less fortunate growers. A few commission men, while denying that they person-

ally engaged in this practice, defended it on the ground that it might be necessary at times to keep the business of a grower who would stop shipping to a house if unusually low returns were sent to him for any one day's shipments. In addition, they said, when receipts from a particular grower fall off and it is known some other commission merchant is getting a part of his business, it is only natural to concentrate on this grower's mushrooms and give him a favorable price in an attempt to recover his business.

Many growers shift back and forth from one commission merchant to another and also divide their shipments between two or more houses. This practice on the part of growers is no doubt conducive to price pooling, and as a result the growers who receive relatively high returns for their mushrooms because of a

superior grade and pack are in constant danger of losing a part of this premium. When this happens, it tends to discourage growers who undertake the extra trouble and expense of improving their grade and pack.

Pooling, it is true, is practiced by the majority of cooperatives and has been found to be a useful and equitable method of sharing expenses and returns. In a cooperative, however, only products are pooled which are uniform as to grade and other quality factors. Consequently, no grower is penalized as he may be when deductions are made arbitrarily and without his knowledge or consent.

## SPECIAL PROBLEMS

In addition to the general problems mentioned by growers, certain special problems were brought to light. Mushrooms are extremely perishable and must be marketed as quickly and handled as little as possible. This fact makes centralized packing of mushrooms undesirable and also makes equalization of supplies by storage of a surplus in the fresh state practically impossible. The quantity and quality of mushrooms produced are also subject to fluctuations. During a warm period, mushrooms "break" and the quantity produced increases greatly. The grading of mushrooms is complicated by wide variations in size.

Table 14

AVERAGE SEASONAL NET PRICES <sup>1/</sup> RECEIVED FOR VARIOUS GRADES OF MUSHROOMS BY  
46 GROWERS IN THE KENNETT SQUARE AREA OF PENNSYLVANIA,  
JULY 1, 1939, TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	AVERAGE SEASONAL NET PRICE PER 3-POUND BASKET FOR EACH GRADE								
	SPECIAL	EXTRA FANCY	FANCY	MEDIUM	SPECIAL MEDIUM AND FANCY MEDIUM	MIXED MEDIUM AND BUTTONS	BUTTONS	OPENS AND SPOTS	WEIGHTED AVERAGE ALL GRADES
<i>Cents</i>									
Sales at the farm to:									
Soup companies	-	-	-	41.2	-	38.4	37.3	-	37.7
Canneries	-	-	-	-	-	40.4	42.8	-	40.6
Chain-store buyers	-	-	-	40.7	41.9	-	-	-	41.1
Local buyers	40.5	-	38.7	33.6	-	-	-	15.4	35.8
Average, all sales at farm	40.5	-	38.7	39.8	41.9	39.9	38.3	15.4	39.3
Shipped on consignment to:									
New York City	35.9	40.6	44.3	30.8	-	-	32.4	13.3	34.9
Philadelphia	43.0	-	45.0	30.8	-	-	-	7.0	30.9
Newark	38.5	-	-	38.5	-	37.7	35.0	17.0	31.7
Washington	49.0	-	45.0	-	-	-	-	22.0	47.5
Boston	49.0	-	-	-	-	-	-	22.0	47.4
Average, all consignment sales	37.0	40.6	44.3	30.9	-	37.7	32.8	14.3	34.9
Direct sales delivered to:									
Southern cities	49.0	-	-	-	-	-	-	-	49.0
Local retailers	41.5	-	-	-	-	-	-	-	41.5
Average, direct sales delivered	45.7	-	-	-	-	-	-	-	45.7
Average, all sales	37.1	40.6	42.6	34.1	41.9	39.8	37.6	14.4	37.1

<sup>1/</sup> Per 3-pound basket after deducting commission, transportation, and cost of baskets, wire and paper.



Table 15

COMPARISON OF SHIPMENTS TO NEW YORK CITY  
ON CONSIGNMENT BY 8 OXFORD GROWERS  
AND 38 OTHER GROWERS,  
JULY 1, 1939, TO JUNE 30, 1940

GRADE	PROPORTION PACKED IN EACH GRADE		AVERAGE SEASONAL NET PRICE PER 3-LB. BASKET <sup>1/</sup>	
	8 OXFORD GROWERS	38 OTHER GROWERS	8 OXFORD GROWERS	38 OTHER GROWERS
	Percent		Cents	
Special	-	56.9	-	35.9
Extra fancy	10.6	1.1	42.2	36.5
Fancy	48.2	7.5	44.2	44.5
Medium	20.7	29.1	38.0	29.4
Buttons	11.7	2.4	32.5	32.3
Opens and spots	8.8	3.0	19.6	8.6
Total or average	100.0	100.0	39.2	33.8

<sup>1/</sup> After deducting commission, transportation, and cost of baskets, paper and wire.

Furthermore, quality becomes steadily poorer as the age of a bed increases. Mushrooms expand immediately after they are picked and later contract after they lose some of their moisture. For this reason, containers for mushrooms must be elastic and well ventilated.

Growers in the area have a wide choice of outlets. But even though there is an enormous duplication of efforts to obtain mushrooms on the part of numerous buyers and solicitors, any effect this competition might have on prices appears to be offset by the selling habits of the producers. Many of them not only sell small quantities here and there, but when they consign their mushrooms, they usually shift from one commission merchant to another.

Other factors also serve to depress prices. For example, some mushrooms from Kennett Square arrive on the market after the large buyers have obtained their supplies. One or two producers may not have their mushrooms packed on time and this delays an entire truckload. In addition, because Kennett Square mushrooms have a poor reputation, the buyers insist on inspecting a fairly large sample. A buyer usually selects and opens several bottom baskets in various bundles.

Another price-depressing factor is the custom of shipping the same grower's pack to two or more commission houses in the same market. This practice gives unscrupulous buyers an opportunity to assert that the same pack can be bought for less at a competitor's store. Lack of uniformity in grade and pack, poor quality, late arrivals, and heavy supplies all affect net returns to the growers adversely. In addition, shipments are consigned to many houses, and because the volume handled by most is comparatively small, they have little incentive to handle mushrooms properly or to push their sale.

Mushrooms are a problem product from the point of view of the retailer. Many small, independent retailers handle mushrooms only because a few of their customers request them. Often a small retailer will buy a few baskets from a chain store rather than from the wholesale market to fill his limited demand. It is claimed that frequently the margin at which chains handle mushrooms is so small that the small, independent retailer can buy a few baskets from a nearby chain store as cheaply as in the wholesale market. Obviously, therefore, he regards mushrooms as a "red-ink," or at best a nonprofit item.

Furthermore, mushrooms are sold in a container that is undesirable from both the retailer's and consumer's viewpoints. A customer desiring mushrooms may pick over the entire contents of a 3-pound basket and buy perhaps half a pound. As this procedure is repeated by subsequent customers, the product and the pack become progressively less attractive. Mushrooms are extremely perishable and turn black after relatively little handling. Therefore, the retailer has trouble in disposing of the last pound or two in each basket.

#### GRADING AND PACKING PROBLEMS

Throughout the survey the statement was made repeatedly in the city markets that the Kennett Square area mushroom pack was the worst coming on the market. Picturesque terms common in the trade were used to describe the pack and grade. When the growers were asked whether grading should be improved before group action on marketing problems was con-

Table 16

PROPORTION OF MUSHROOMS SOLD IN SPECIFIED WAYS BY 8 OXFORD GROWERS  
AND 38 OTHER GROWERS AND AVERAGE SEASONAL NET PRICES RECEIVED,  
JULY 1, 1939 TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	PROPORTION SOLD IN SPECIFIED WAYS BY -		AVERAGE NET PRICE PER 3-LB. BASKET <sup>1/</sup>	
	8 OXFORD GROWERS	38 OTHER GROWERS	8 OXFORD GROWERS	38 OTHER GROWERS
	<i>Percent</i>		<i>Cents</i>	
Sales at the farm to:				
Soup companies	11.1	16.3	41.6	37.4
Canneries	0.4	21.2	40.0	40.6
Chain-store buyers	-	11.8	-	41.1
Local buyers	1.5	4.9	43.5	35.5
Total or average, all sales at farm	13.0	54.2	41.8	39.2
Shipped on consignment to:				
New York City	86.2	37.0	39.2	33.8
Philadelphia	0.5	4.7	44.1	30.7
Newark	-	1.8	-	31.7
Washington	0.3	1.2	45.0	47.5
Boston	-	0.7	-	47.4
Total or average, all consignment sales	87.0	45.4	39.2	34.0
Direct sales to:				
Southern cities	-	0.2	-	49.0
Local retailers	-	0.2	-	41.5
Total or average for direct sales	-	0.4	-	45.7
Total or average for all sales	100.0	100.0	39.2	36.9

<sup>1/</sup> After deducting commission, transportation, and cost of baskets, wire and paper.

sidered, 45, or 85 percent of those interviewed, answered "yes." Not only did commission men complain about a poorly graded pack, but also about the prevalence of short weight.

A related problem is the type of package used. As has been pointed out previously, mushrooms must be sold in a flexible, well-ventilated container. A large variety of answers were given by producers when asked whether they favored a consumer package of one pound or less. A small majority expressed opposition to consumer packages, generally on the grounds that such packages involved additional trouble and expense.

Some growers favored consumer packages provided they were no smaller than one pound. A few gave the logical answer that they would favor consumer packages if net returns were

increased by their use. Some growers also thought that in the future consumers would demand a more modern, convenient, and sanitary package. The wholesale trade generally favored the 3-pound basket, but some stated that they would prefer a smaller package provided the physical problems of handling it could be solved.

A few growers and handlers considered the attitudes and preferences of the consumer. They believed that demand should be stimulated by a program of education and sales promotion directed toward the general public. It was mentioned, for example, that some people still harbor a fear of poisonous mushrooms because they do not know that mushrooms are cultivated. It was also pointed out that consumers are generally unaware of the many

ways in which mushrooms may be served and that there is an opportunity to increase consumption.

### PROPOSED MARKETING PLANS

The second objective of the survey was to determine the degree to which growers were interested in a coordinated marketing plan for mushrooms from the Kennett Square area, and the support which they were willing to give the plans proposed. Growers and buyers were accordingly asked a series of questions about two marketing plans, each of which had been proposed and supported by several members of the industry committee.

### OUTLINE OF PLANS PROPOSED

According to the minutes of the meeting held April 30, 1940, in Wilmington, the general outlines of the two plans are as follows:

1. The central thought in the first plan was elimination or drastic regulation of floor selling as it is conducted now. It was emphasized that this program was not directed against chain-store buyers or any other group, but against any form of uncontrolled direct floor buying. Those proposing and supporting this plan were of the opinion that the price established by floor buyers determined the wholesale price in the various city markets, inasmuch as the buyers in these markets must be in a position to compete with distributors who buy in the country and ship mushrooms directly to their warehouses. It was suggested that an executive committee should be elected or appointed to administer the plan.

2. The second plan proposed was outlined in the minutes of the Wilming-

Table 17

PROPORTION OF MUSHROOMS SOLD IN SPECIFIED WAYS BY 6 OXFORD GROWERS AND 5 OTHER GROWERS COMPARABLE AS TO SIZE OF BUSINESS <sup>1/</sup> AND AVERAGE SEASONAL NET PRICES, JULY 1, 1939 TO JUNE 30, 1940

METHOD AND PLACE OF SALE AND TYPE OF BUYER	PROPORTION SOLD IN SPECIFIED WAYS BY -		AVERAGE NET PRICE PER 3-LB. BASKET <sup>2/</sup>	
	6 OXFORD GROWERS	5 OTHER GROWERS	6 OXFORD GROWERS	5 OTHER GROWERS
	<i>Percent</i>		<i>Cents</i>	
Sales at the farm to:				
Soup companies	6.6	21.2	41.2	40.0
Canneries	0.6	2.2	40.0	-
Local buyers	2.5	0.4	43.5	36.5
Total or average, all sales at farm	9.7	23.8	41.7	39.9
Shipped on consignment to:				
New York City	88.9	58.0	41.4	36.9
Philadelphia	0.9	18.2	44.1	29.5
Washington	0.5	-	45.0	-
Total or average, all consignment sales	90.3	76.2	41.5	35.2
Total or average for all sales	100.0	100.0	41.5	36.3

<sup>1/</sup> All planted less than 25,000 square feet of bed space to mushrooms. The average of the 6 Oxford growers was 20,944 square feet of bed space per grower, the average of the 5 other growers was 19,886 square feet of bed space per grower.

<sup>2/</sup> After deducting commission, transportation, and cost of baskets, wire and paper.



ton meeting as follows: " - - better market conditions could be arrived at by all of the local industry agreeing that all mushrooms be turned over at Kennett Square to a sales organization for distribution. In this way, control of sales vested in one agency experienced in distribution of fresh fruits and vegetables could likely improve our conditions. Organized buying can only be met by organized selling."

Those supporting the second plan emphasized that they were not suggesting or recommending that the Mushroom Growers Cooperative Association be established as the sales agency. The opinions of growers and others with respect to certain features of the two plans are presented in the following pages together with additional features which might be incorporated in the plan adopted.

#### GENERAL OPINIONS AND ATTITUDES

In answer to the question, "What can mushroom growers do individually to overcome their marketing problems?," nearly three-fourths of the growers interviewed replied that they could do nothing individually. A few answered that growers could improve their pack. Others replied that each grower should limit the number of commission men handling his shipments.

Many different answers were given to the question, "What can growers and other elements in the industry do through organization to overcome their marketing problems?" It is important to observe, however, that about 80 percent of the growers believed that something could be done by organization, and it may perhaps be assumed that about the same percentage of all growers in the area would like to see a cooperative marketing program adopted.

Some of the possibilities of organization, each of which was mentioned by several growers, were the following: (1) A Federal marketing agreement for the area could be put in effect, (2) selling at the farm could be eliminated, (3) refills could be reduced, and (4) a central sales agency could be set up. No other possibilities were mentioned by more than two growers.

In answer to the question, "Would you be in favor of some organization set up in this area to take charge of the marketing of all mushrooms, an organization in which all local elements in the industry and all the various grower groups would have a fair and proportional representation?," 32 growers replied with an unconditional "yes," and 7 growers definitely answered "no." However, 8 additional growers said, "No, only growers should be included in the organization." In other words, these 8 implied that they would be in favor of such an organization if only growers were included and not the "other elements in the industry." Five growers did not answer and one was undecided. Of the 15 growers answering "no," all but one were considerably below the average in size of business. Only a few growers had definite ideas as to the type of organization that should be formed.

In answer to the question, "Do you think it would be possible to have every local element in the industry and every growers' group represented fairly and proportionately so that there would be no dissension and jealousies?," 22 growers said "yes," 30 said "no," and one was undecided. The 22 growers who answered "yes," however, represented about 2.6 million square feet, and the 30 who answered "no" about 2.1 million square feet of bed space. When asked how they thought dissensions and jealousies could be eliminated, the majority of growers replying thought that some sort of government regulation or supervision would be necessary.

#### OPINIONS ON DETAILS OF PLANS

It has already been mentioned that 45 of the 53 growers interviewed believed that improved grading was necessary for the success of any program. Growers as well as buyers were almost unanimously agreed that improved grading should be an important objective of any plan. When asked for suggestions as to methods of obtaining improvements in grade and pack, growers offered a variety of plans. The establishment of uniform grades was mentioned by a number. Also mentioned were the use of stricter grading laws, adoption of an inspection system, a check on weights and packs, and others.

When asked if they were in favor of central packing houses for grading and packing, only 7 growers answered "yes." The remainder who replied either said "no" or doubted that central packing houses would be successful. When asked if they would favor inspectors visiting growers' packing houses to check the pack, 6 growers said "no," 37 answered "yes," and 10 made no reply.

Growers were asked what individual or agency, in their opinion, should determine the method and place of sale. Three alternatives were suggested to them and they were asked to indicate their first choice and also any other that would be acceptable. Most growers replied that they were unable to decide between the alternatives suggested. However, 15 growers approved and 5 objected to leaving these decisions to a "hired administrator"; 9 approved and 7 objected to giving this authority to a "marketing committee of the sales agency"; and 9 growers approved and 9 disapproved employing the services of a "large and outstanding brokerage firm."

The number of commission merchants should be limited in the opinion of 40 of the 53 growers interviewed, and the majority of these believed that from 5 to 14 would be sufficient in New York City. The majority of the growers giving specific answers believed that 2 houses in Boston, 2 in Newark, 2 in Baltimore, and 3 in Philadelphia would be sufficient. Ten growers stated that the number of commission merchants patronized should not be limited, 2 growers said shipments should be made to all the "honest houses," and one that the proposed cooperative should have a place of business in each city.

The attitude of commission merchants toward limiting the number employed as receivers of Kennett Square mushrooms depended on whether the individual interviewed expected to be one of the limited number selected. The large operators replied that the number should be limited and those with a small business opposed any reduction.

When asked whether an attempt should be made under a marketing program to establish wholesale market prices for the various grades of mushrooms each day or each week, 30 growers answered "yes," 4 said "set a minimum

price," and 12 did not reply. In the opinion of 20 growers, a quota should be set limiting the maximum quantity to be marketed by each grower for fresh consumption in any one day or week; 16 growers thought such quotas should not be set. The remainder did not reply.

A central sales agency, if set up, should have a rigid marketing agreement with all growers, in the opinion of 37 of those interviewed. One did not favor a marketing agreement and 16 made no comment. Asked whether the sales organization should eventually have its own place of business in one or more of the large city markets and operate as a wholesaler, 18 growers answered "yes" and 17 answered "no."

The growers interviewed were also asked whether a cooperative sales agency organized in the Kennett Square area should undertake to encourage the establishment of similar agencies in other important producing areas of the Northeast and cooperate with them in a broad marketing plan including the establishment of quotas for various cities. In addition, they were asked if the sales agencies in all areas should then establish wholesale and jobbing branches in the largest cities and conduct joint sales promotional and advertising campaigns. All the growers replying favored at least two of these proposals. Eighteen said "yes" to all these possibilities, and 17 more said "yes" to all except the establishment of wholesale and jobbing houses in city markets. Two other growers favored only two of the possibilities and 16 did not reply.

When asked the important question, "Would you be willing to have a certain fee per package for inspection, advertising, or sales promotion deducted from the market price you received for your mushrooms?," only 2 growers said "no." Forty-two growers said "yes" unconditionally, 4 more said "yes, if it pays," and 5 did not reply.

In answer to the question, "Do you believe consumer packages of 1 pound, 1/2 pound, and maybe 1/4 pound sizes should be used regardless of commission merchants' opposition to them?," 27 growers answered "no," and 20 growers gave answers indicating various degrees of approval. However, the 20 growers



who approved of consumer packages represented a production about twice as large as the 27 who answered "no." Two growers were undecided and 4 did not reply.

When asked whether or not they thought commission house solicitors should be protected from loss of income under any marketing program set up in the area, 5 growers answered "yes," 39 "no," and 9 made no comment.

This section of the report shows that on the whole growers agree reasonably well as to the need for a marketing program for fresh mushrooms and the general principles on which it should be established. Some wide differences of opinion exist but these relate mainly to operating plans.

### OTHER MARKETING PLANS

Regardless of what this survey shows or recommends, the responsibility of determining the type of program to be adopted must be assumed by the growers, or, more specifically, by committees representing them. To assist them in reaching a decision, a brief description of alternative or supplementary marketing plans is included in this report. It is probable that any of these plans would have to be modified to fit conditions in the Kennett Square area.

### THE CHICAGO MUSHROOM MARKETING PROGRAM

The organization and operations of the Mushroom Growers Association of Chicago were surveyed briefly in July 1940 so that an account of its experience might be included in this report. In the early 1930's mushroom growers in the vicinity of Chicago were faced with many of the same problems that now confront Kennett Square growers. Returns were low; it was claimed that growers competed with each other in cutting prices to buyers; and there were charges that prices in the market had no relation to quality or supply. The marketing cooperative organized by these growers started in a very modest way. In a few years, however, the membership included nearly all commercial producers of mushrooms in the vicinity of Chicago. A wholesale house was established in the Chicago market, which now handles all the mushrooms shipped by mem-

bers that are sold on the market. In addition, a large part of the mushrooms delivered in Chicago by other growers is handled by the cooperative.

The entire production of the members is packed in 1-pound and 1/2 pound cardboard boxes and the mushrooms are carefully graded. The 1-pound box used is a 2-section, waxed cardboard box with four openings for ventilation in the top and in the bottom. The half-pound box has a cellophane cover. It is well ventilated and it can be packed and closed from the bottom. The 1-pound boxes are sent to market in wooden crates in which the containers are packed 2 wide, 5 lengthwise, and 3 deep, with wooden shelves between the three layers. The name of each member is stamped on the boxes he packs as is also the association's brand, "Fairy Ring." The packages are attractive, each grade is distinguished by the color design of the container, and the three grades adopted by the association are now well established and dependable.

The experience of these Chicago growers indicates that, if necessary, a cooperative plan started in a small way might well be considered. It is possible that success would crown the efforts of a relatively small group of cooperative minded growers working together to improve grading and packaging to the extent that their brand would command a premium. Shipments by such a group might be made to no more than one or two commission houses in New York City and one in each of the other markets patronized. Considerable time might elapse before any benefits would accrue from such a plan, but after the dependability of the brand became recognized, favorable results should be obtained. Other producers could be admitted to membership when they met the rigid grading and packaging standards of the group.

### A COUNTRY AUCTION PROGRAM

When the growers interviewed were asked whether they thought one or more country auctions similar to those operating in New Jersey for fruits and vegetables should be established in the area, 20 growers either answered "yes," or said that they would like to see one tried. About an equal number of growers, 19, either answered "no," or said that they did



not think an auction for mushrooms would be successful. Fourteen growers did not answer the question.

Most of the growers who did not favor an auction in the area based their objections on the fact that mushrooms are highly perishable. Strawberries, however, are almost as perishable as mushrooms, and strawberries are the leading commodity handled by the 75 or more small-lot country fruit and vegetable auctions in the Eastern Seaboard States.

Kennett Square growers need go no farther than New Jersey to observe in operation some of the most successful cooperative small-lot country fruit and vegetable auctions in the country. It is no doubt true, however, that many problems would have to be worked out should an auction be established in the Kennett Square area. It would probably be advisable to undertake it first in a small, experimental way. The humble beginning only 9 years ago of the largest auction in New Jersey, now handling nearly a million packages of fruits and vegetables each season, may be cited as an example of how such an auction might be started. In the case of this New Jersey auction, about 20 growers assembled informally and each agreed to advance \$5 to help construct a simple wooden shed. These 20 growers then agreed to bring their produce to the auction for three weeks and sell it regardless of whether they lost money by doing so or not. Long before the end of this trial period many other growers had joined them and their organization was well on the road to success.

When asked about the possibilities of an auction for the Kennett Square area, two local buyers in the area stated that they favored the establishment of such an auction. The quantity of mushrooms purchased each year by these two buyers alone is about double the average annual volume for all small-lot country fruit and vegetable auctions operating in the Eastern Seaboard States.

The local buyers felt that one serious problem for themselves and the transportation companies would be partially solved by an auction. Both the trucking companies and local buyers find it difficult to get their trucks away from the producing area early enough in

the evening to arrive in good time on the city markets. In the opinion of the buyers an auction held each day between about 2 and 5 P.M. would speed up picking and packing because growers wishing to sell at the auction would be obliged to have their mushrooms ready earlier in the day. Consequently, late arrivals at New York City and other markets would be reduced as trucks leaving Kennett Square after the auction was over would arrive at New York about five hours later.

Kennett Square mushroom shipments as a rule do not now arrive in New York until after midnight, or even later. Consequently, Hudson Valley mushrooms, which arrive early, usually sell first and at better prices. Selling on the market is not supposed to begin until midnight, but it is common knowledge that many buyers of large quantities with a select trade tour the market long before that time, select the produce they want and then leave the market. Mushrooms that arrive two or three hours later must be sold to the late buyers, many of whom are reputed to be "bargain hunters."

#### A FEDERAL MARKETING AGREEMENT

Nearly every grower in the area with whom the possibility was discussed expressed approval of some form of government regulation. Most of them had in mind a marketing agreement that would establish prices to be paid by all buyers, limit the quantity of mushrooms produced by individual growers, or do other things which cannot be undertaken under a Federal marketing agreement. A few growers, however, understood reasonably well the possibilities and limitations of a Federal marketing agreement which are here discussed briefly.

The chief limitations of a marketing agreement will be mentioned first. Such an agreement could not fix minimum prices. It could not be applied to mushrooms bought by canneries or soup companies. In addition, it is not certain that it could regulate effectively the marketing of fresh mushrooms sold within the State in which they were produced.

A Federal marketing agreement could prohibit unfair methods of competition and unfair trade practices in the handling of mush-

rooms. It could also provide for "price posting" by handlers of fresh mushrooms who would then have to sell at prices not lower than those filed with the administrator until due notice was given of a change in prices.

Such an agreement could limit the quantity of fresh mushrooms marketed during any specified period or periods by:

1. Limiting the total quantity of fresh mushrooms marketed or any grade, quality, or size thereof marketed by all handlers thereof.

2. Allotting the quantity of fresh mushrooms or any grade, size, or quality thereof which each handler may purchase under a uniform rule fair to all handlers.

3. Allotting the quantity of fresh mushrooms or any grade, size, or quality thereof which any handler may market during any specified period or periods.

4. Determining the existence and extent of a surplus of fresh mushrooms or any grade, size, or quality thereof and providing for control and disposition of such surplus, and for equaliz-

ing the burden of such surplus elimination or control among producers and handlers.

Growers become handlers when they ship their own mushrooms to market on consignment and for the part of their crop which they ship themselves they would be liable as handlers under the agreement. For those sold at the farm that are later sold for fresh consumption, the buyer who purchases them at the farm is responsible as handler.

A Federal marketing agreement could be put into effect in the area by the Secretary of Agriculture if approved by two-thirds of the mushroom producers in the area (or by growers producing two-thirds of the mushrooms sold for fresh consumption), and if approved, in addition, by handlers (excluding growers insofar as they may be handlers) of 50 percent of the volume of mushrooms sold for fresh consumption. Due to the close proximity of the Temple, Pennsylvania, southern New Jersey and Hudson Valley areas and the direct competition existing between these areas and Kennett Square, it is doubtful if an agreement would be put into effect unless all these areas could be included.









